

### **REMARKS**

Claims 1, 2, 5-11, 14, 15, and 22-26 are in the application. Reconsideration and withdrawal of the rejections is requested in view of the following remarks.

By this Amendment, claims 1 and 22 have been changed to include "controlling the thickness of the heated liquid layer."

The claims describe methods where a liquid layer is formed on the workpiece. The liquid layer may be formed by applying liquid onto the workpiece, or via use of steam. The thickness of the liquid layer is controlled. Ozone gas in the liquid layer reacts to clean or process the workpiece. The ozone gas may diffuse into and through the liquid layer, dissolve into the liquid, or be entrained in the liquid, or a combination of them may be used.

Turning to the prior art, Lampert *et al.*, U.S. Patent No. 5,131,983, describes a process using a process gas (which may be ozone, among various others) in a mist of water. The process gas reacts with the water mist while both are in the gas or vapor phase. Col. 2, line 53. Lampert *et al.* repeatedly and exclusively discloses only use of a mist. Col. 2, lines 4, 8, and 41; Col. 4, lines 29 and 60; Col. 5, lines 2 and 60; Col. 6, line 11. Lampert *et al.* also refers to the water as provided in a "finely divided liquid state," Col. 2, line 4, or as "an aerosol," Col. 2, line 49; Col. 5, line 60. Droplet size is important. Col. 2, line 46.

Lampert *et al.* does not disclose use of a liquid layer, as claimed. Correspondingly, there can be no suggestion in Lampert *et al.* of controlling the thickness of the liquid layer, as claimed, because there is no liquid layer in Lampert *et al.*

Lampert *et al.* also does not suggest diffusion of ozone, or any other process gas, through a liquid layer, as described in claim 1. Rather, in Lampert *et al.*, the process gas reacts with water mist, with the gas/mist then acting on the wafer surface. Diffusion is not mentioned or suggested. Indeed, Lampert *et al.* makes no mention of, and provides no motivation for, having a liquid layer, and then having a process gas diffuse through the liquid layer.

For these reasons, claims 1, 2, 7, 8, 10, 11, 15, 22, 23, 24 and 25 are not anticipated by Lampert *et al.* Claims 5, 6, 9, and 14 are also patentable over the prior art for the reasons above.

Regarding the rejection of claim 26 at paragraph 7 of the Office Action, although Koizumi *et al.* (U.S. Patent No. 5,503,708) discloses steam, Koizumi *et al.* is purely a gas/vapor phase ashing process. Koizumi *et al.* strives to avoid any liquid phase on the wafer, to avoid water marks. Col. 4, lines 37-45; Col. 8, lines 61-65; Col. 9, lines 52-60. Based on the Abstract, JP 63 110732 appears to disclose use of steam, HCl and ozone, to avoid deterioration of the processing liquid. No liquid layer is disclosed. Accordingly, the combination of Lampert *et al.* with Koizumi *et al.* or JP 63 110732 does not render claim 26 obvious as none of these references disclose a liquid layer.

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In view of the foregoing, the claims are patentable over the prior art. A Notice  
of Allowance is requested.

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